

Remarks/Arguments:

Claims 13, 22, 25-27, 31, 37, 38, 42, and 47-49 have been amended. No new matter is introduced herein. Claims 13-19 and 21-52 are pending.

Applicants acknowledge with thanks the courtesy shown to their representative by Examiner Vu during the telephone interview of September 13, 2006. During the course of the interview, Applicants' representative discussed the differences between Yamaji (U.S. Patent No. 6,141,385) and Applicants' claim 13. Namely, that Applicants' feature of generating time interval information without tagging the information and Applicants' sequence of 1) outputting a series of data frames based on time interval information and 2) entering the stored stream data to the sending means based on the time interval information are neither disclosed nor suggested by the cited art. No agreement was reached with respect to claim 13. In addition, Applicants' representative discussed the differences between Saeijs et al. (U.S. Patent No. 6,556,590) and Applicants' proposed amended claim 22. Namely, that Applicants' features of 1) using a transmission start time and a predetermined transmission start time delay for the packet processing start time information for only the first packet of the first frame and 2) using the packet processing start time information determined for the first packet of the first frame for the first packet of the remaining frames are neither disclosed nor suggested by the cited art. The Examiner acknowledged that the amendment to claim 22 overcomes the rejection. Furthermore, Applicants' representative discussed the differences between Saeijs et al. and Applicants' proposed amended claim 27. Namely, that Applicants' feature of a transmission packet which contains a transmission path header in which additional information is allocated in the transmission path header is not disclosed nor suggested by the cited art. The Examiner acknowledged that the amendment to claim 27 overcomes the rejection.

Claims 13-19 and 21 have been rejected under 35 U.S.C. §102(e) as being anticipated by Yamaji (U.S. Patent No. 6,141,385). This rejection, however, is respectfully overcome for the reasons set forth below.

Claim 13, as amended, includes features neither disclosed nor suggested by the cited art, namely:

time intervals generating means which newly generates predetermined time interval information, when transmitting information, without embedding said information;

outputting means which outputs a series of data frames as stream data based on said generated predetermined time interval information received from said time intervals generating means;

buffering means which stores said output stream data and said generated predetermined time interval information received from said outputting means;

sending means which receives said stored stream data from said buffering means, divides said stored stream data into packet data and outputs said packet data; and

transmission managing means which enters said stored stream data from said buffering means to said sending means based on said stored predetermined time interval information received from said buffering means. (emphasis added).

These features are disclosed, for example, at p.41, line 20-p.42, line 22; and Fig. 6.

Yamaji discloses, in Fig. 1, an MPEG coded picture decoding apparatus. Stream buffer memory 1 stores a bit stream of MPEG coded multiplex data received from a line interface section 26 (Col. 4, line 65-Col. 5, line 6). Video buffer memory 6 stores a video stream received from PES packet processing section 4 (Col. 5, lines 42-44) processed by pack header processing section 3 and PES packet processing section 4 (Col. 5, lines 7-36). When a group of pictures (GOP) is detected by detection section 5, buffer memory control section 2: 1) reads out the stream data in stream buffer memory 1 to pack header processing section 3 and 2) reads out one video PES stream data from video buffer memory 6 (Col. 6, lines 55-62). Yamaji further discloses that pack header processing section 3 extracts SCR code information for a clock generation section 15 (Col. 5, lines 7-17 and Col. 6, lines 38-42) and PES packet processing section 4 extracts PTS code information for time information production section 16 (Col. 5, lines 18-35 and Col. 6, lines 43-48).

Yamaji does not disclose or suggest Applicants' claimed features of "time intervals generating means which newly generates predetermined time interval information... without embedding said information," or "outputting means which outputs a series of data frames as stream data based on said generated predetermined time interval information received from

said time intervals generating means," or "sending means which receives said stored stream data from said buffering means, divides said stored stream data into packet data and outputs said packet data," or "transmission managing means which enters said stored stream data from said buffering means to said sending means based on said stored predetermined time interval information received from said buffering means" (emphasis added). These features are neither disclosed nor suggested by Yamaji. At paragraph 2b of the Office Action, the Examiner asserts that line interface section 26 is equivalent to the outputting means recited in Applicants' claim 13. Applicants respectfully disagree. Yamaji does not disclose or suggest that the line interface 26 outputs a series of data frames based on generated predetermined time interval information received from said time intervals generating means. This feature is neither disclosed nor suggested by line interface section 26 of Yamaji. Yamaji, instead, discloses time generating means 15 and 16 for respectively using SCR and PTS code information, i.e. embedded information, to generate time interval information. Thus, according to Yamaji, the time interval information is generated after outputting a bitstream and after dividing the stream data into packet data. Yamaji is silent on generating predetermined time interval information without embedding the information. Yamaji is also silent on entering stored stream data from a buffering means to a sending means based on the stored predetermined time interval information received from the buffering means. Yamaji, instead, outputs a series of data frames based on a GOP detection signal. Thus, Yamaji does not include all of the features of claim 13. Accordingly, allowance of claim 13 is respectfully requested.

Claims 14-19 and 21 include all of the features of claim 13 from which they depend. Accordingly, claims 14-19 and 21 are also patentable over the cited art.

Claims 27-35, 37-45, 47 and 50-52 have been rejected under 35 U.S.C. §102(e) as being anticipated by Saeijs et al. (U.S. Patent No. 6,556,590). It is respectfully submitted, however, that these claims are now patentable over the cited art for the reasons set forth below.

Claim 27, as amended, includes features neither disclosed nor suggested by the cited art, namely:

an interface which receives a transmission packet which contains a

transmission path header in which additional information is allocated in the transmission path header and data blocks;

additional information extracting means which extracts said additional information from said transmission path header;

additional information inserting means which adds or inserts said additional information to said data packet and outputs as an output packet the data packet together with said additional information of a type of data format which can be processed by an application simultaneously (emphasis added).

Claims 31, 38, and 42 include a similar recitation. These features are disclosed, for example, page 56, line 23-page 57, line 7; page 58, lines 21-24 and Fig. 18 (d).

Saeijs et al. disclose, in Fig. 18, a recording and playback system that inputs a data stream in block 134 and tags each transport packet via tagging block 135. The tagging bits are generated with respect to a local counter 133 and are recorded along with the transport packets via buffer block 137 (Col. 22, lines 42-57). Saeijs et al. do not disclose or suggest Applicants' claimed features of "an interface which receives a transmission packet which contains a transmission path header in which additional information is allocated in the transmission path header" or "additional information extracting means which extracts said additional information from said transmission path header" or "additional information inserting means which adds or inserts said additional information to said data packet and outputs as an output packet the data packet together with said additional information" (emphasis added). These features are neither disclosed nor suggested by Saeijs et al. As acknowledged by the Examiner, Saeijs et al. do not teach storing the timing information in the packet header. Therefore, Saeijs et al. do not include all of the features of claim 27. Accordingly, allowance of claim 27 is respectfully requested.

Claims 28-30 and 50 include all of the features of claim 27 from which they depend. Accordingly, claims 28-30 and 50 are also patentable over the cited art.

Amended claims 31, 38, and 42, although not identical to claim 27, include features similar to claim 27 which are neither disclosed nor suggested by the cited art. Namely, a transmission path header in which additional information is allocated. Accordingly, allowance of claims 31, 38, and 42 is respectfully requested.

Claims 32-34 include all of the features of claim 31 from which they depend; claims 35 and 37 include all of the features of claims 27 or 31 from which they depend; claims 39-41 and 51 include all of the features of claim 38 from which they depend; claims 43, 44, and 52 include all of the features of claim 42 from which they depend; and claims 45 and 47 include all of the features of claims 38 or 42 from which they depend. Accordingly, claims 28-30, 32-35, 37, 39-41, 43-45, 47 and 50-52 are also patentable over the cited art.

Claims 22-26, 36, 46 and 48-49 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Saeijs et al. It is respectfully submitted, however, that these claims are now patentable over the cited art for the reasons set forth below.

Claim 22, as amended, includes features neither disclosed nor suggested by the cited art, namely:

...the packet processing start time information for only the first packet of the first frame uses a transmission start time for the first packet of the first frame and a predetermined transmission start time delay...

...the packet processing start time information for the first packet of each of the remaining frames uses the packet processing start time information determined for the first packet of the first frame...

...said packet processing start time information of the first packet of each frame of said stream data is expressed by:

$$T1 = X + Z + Y (N - 1),$$

(where $X \geq 0$, $Z \geq 0$) X denotes the transmission start time for the first packet of the first frame, N denotes a frame number, Y denotes a frame period, Z denotes the predetermined transmission start time delay, and T1 denotes the packet processing start time information of said packets... (Emphasis Added).

These features are supported, for example, at p. 50, line 6-p. 53, line 12; and Figs. 8, 11 and 12.

Saeijs et al. are discussed above. Saeijs et al. do not disclose or suggest Applicants' claimed features of "the packet processing start time information for only the first packet of the first frame uses a transmission start time for the first packet of the first frame and a predetermined transmission start time delay" or "the packet processing start time

information for the first packet of each of the remaining frames uses the packet processing start time information determined for the first packet of the first frame" (emphasis added). These features are neither disclosed nor suggested by Saeijs et al. Saeijs et al., instead, tags each transmission unit with information to determine the start time and the end time of each transmission unit when the transmission unit size is known and constant but the transport rate is unknown (Col. 22, lines 13-24). Applicants' invention provides an advantage over the tagging of Saeijs et al. because applicants' claim 22 include a predetermined transmission start time delay term that is added to the transmission start time of the first packet of the first frame. Because the first packet of the remaining frames is computed using the transmission start time and the predetermined transmission start time delay of the first packet of the first frame, a delay developed during clock time acquisition and transmission start time can be accounted for. Thus, as acknowledged by the Examiner, Saeijs et al. do not include all of the features or the advantages of claim 22. Accordingly, allowance of claim 22 is respectfully requested.

Claims 23 and 24 include all of the features of claim 22 from which they depend; claims 25 and 26 include all of the features of claims 13 or 22 from which they depend; claim 36 includes all of the features of claims 27 or 31 from which it depends; claim 46 includes all of the features of claims 38 or 42 from which it depends; and claims 48 and 49 include all of the features of claims 27, 31, 38, or 42 from which they depend. Accordingly, claims 23-26, 36, 46 and 48-49 are also patentable over the cited art.

On page 4, lines 6-8 of the Office Action, it is asserted that it would have been obvious to one of ordinary skill in the art to practice Saeijs's invention with any additional information to be stored in the packet. Applicants respectfully disagree. The passage relied on, Col. 24, lines 52-58 disclose:

It will be understood that the expression "timing information" has been used herein in its broadest sense to include not only the information depicted in Fig. 23, but also packet sequence numbers, and in general all information needed for timing transparency, meaning that from the view of an external observer, the channel does not affect or alter the timing.

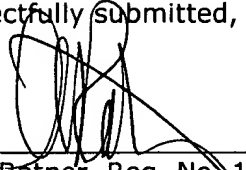
This passage, however, does not disclose or suggest that the additional information is copyright information, as recited by Applicants' claims 36 and 46. Thus, Saeijs et al. do not include all of the features of claims 36 and 46.

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In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance, which action is respectfully requested.

Respectfully Submitted,



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Dated: September 26, 2006

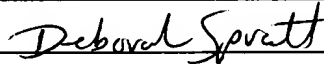
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